

ABSTRACT OF THE DISCLOSURE

A cartridge 100 utilizes a carrier wave of a signal transmitted from a printer PT to generate driving electric powers required for driving respective circuits elements including a sensor SS of a piezoelectric element. The generated electric power is supplied to a sensor driving voltage generator 220 and is then to the sensor SS. The sensor driving voltage generator 220 supplies the electric power to the sensor SS via a supply circuit having a higher impedance. The sensor SS is discharged via a discharge circuit having a lower impedance. Even when there is a limited electric power supply, the structure enables the sensor SS to release a large energy in a unit time and ensures a sufficient displacement of vibration in the sensor SS. This arrangement of the invention ensures application of a sufficiently high voltage to the piezoelectric element of the sensor SS and causes a sufficient resonance of the sensor SS, even when a cartridge communicating with a printing device receives only a small electric power supply.